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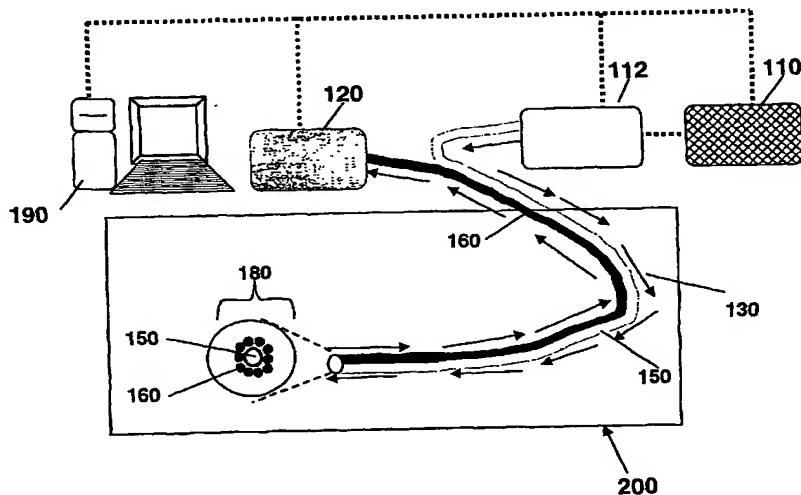
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[Continued on next page]

(54) Title: CATHETER-BASED MID-INFRARED REFLECTANCE AND REFLECTANCE GENERATED ABSORPTION SPECTROSCOPY



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(57) Abstract: A catheter based method and apparatus for reflectance generated absorption spectral analysis of chronic inflammatory vascular conditions such as seen with atherosclerotic plaque within a blood vessel or other body cavity or compartment. The use of a bright mid range infrared light (mid-IR) source yields detectable reflected optical signals that may be sampled from an area smaller or larger than the typical diameter of a mammalian cell. The mid-IR light is delivered at selected mid-infrared wavenumbers. Using the apparatus and methods, the reflectance spectra and reflectance generated absorption spectra of a target tissue can be compared to reference spectra to identify and distinguish normal epithelium from tissue containing physiological markers indicative of vascular disease or other inflammatory conditions.



FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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